

REMARKS

Claims 5, 7, 10, 13-16, 20, 22, 24, 27, 30, 32, 33, and 44-46 have been cancelled without prejudice or disclaimer. Claims 1-4, 6, 8, 9, 11, 12, 17-19, 21, 23, 25, 26, 28, 29, 31, and 38-42 have been amended. No new subject matter has been added. Accordingly, claims 1-4, 6, 8, 9, 11, 12, 17-19, 21, 23, 25, 26, 28, 29, 31, and 34-43 are pending.

Claims 11, 12, 19, 21, and 43 are Allowable

The Office has rejected claims 11, 12, 15, 19, 21, 43 and 44, at paragraph 2 of the Office Action, under 35 U.S.C. § 103(a), as being unpatentable over U.S. Pat. No. 7,425,984 (“Chen”) in view of U.S. Pat. No. 6,757,009 (“Simon”). Claims 15 and 44 have been cancelled, without prejudice or disclaimer, rendering the rejections of these claims moot. Applicants respectfully traverse the remaining rejections.

The cited portions of Chen and Simon fail to disclose or suggest the specific combination of claim 11. For example, the cited portions of Chen and Simon do not disclose or suggest “the selector operable to determine a selected image module from the first image module and the second image module and to selectively cause a raw image captured by the selected image module to be sent to the processing engine; and the processing engine operable to perform an image processing operation on the raw image captured by the selected image module, wherein the processing engine is not configured to perform the image processing operation on the first raw image and the second raw image simultaneously,” as in claim 11.

Chen describes a compound camera system for generating an enhanced virtual image. Chen, Abstract. The camera system has a data processor that is capable of receiving image data from a plurality of camera components and processing the image data from the plurality of camera components to generate the enhanced virtual image. Chen, col. 2, ll. 40-57. The data processor of Chen selects pixels from a first image or a second image depending on which pixels have the least amount of blur. Chen, col. 2, ll. 58-65. The cited portions of Chen fail to disclose or suggest “the selector operable to determine a selected image module from the first image module and the second image module and to selectively cause a raw image captured by the selected image module to be sent to the processing engine; and the processing engine operable to perform an image processing operation on the raw image captured by the selected image module, wherein the processing engine is not configured to perform the image processing operation on

the first raw image and the second raw image simultaneously,” as in claim 11. Rather, Chen describes simultaneously processing a first and a second image to generate a virtual image.

Simon describes a motor vehicle control system that includes a pair of cameras for producing first and second images of a passenger area. Simon, Abstract. The camera system of Simon produces stereoscopic images which are processed simultaneously to determine distance information. Simon, col. 1, ll. 61-62; col. 2, ll.13-24; and col. 3, ll. 39-50. The cited portions of Simon fail to disclose or suggest “the selector operable to determine a selected image module from the first image module and the second image module and to selectively cause a raw image captured by the selected image module to be sent to the processing engine; and the processing engine operable to perform an image processing operation on the raw image captured by the selected image module, wherein the processing engine is not configured to perform the image processing operation on the first raw image and the second raw image simultaneously,” as in claim 11.

Thus, the cited portions of Chen and Simon, individually or in combination, fail to disclose or suggest at least one element of claim 11. Hence, claim 11 is allowable.

Claims 12, 19, 21, and 43 depend from claim 11, which Applicants have shown to be allowable. Hence, the cited portions of Chen and Simon, individually or in combination, fail to disclose at least one element of each of claims 12, 19, 21, and 43. Accordingly, claims 12, 19, 21, and 43 are also allowable, at least by virtue of their dependence from claim 11.

Claims 17 and 18 are Allowable

The Office has rejected claims 17 and 18, at paragraph 3 of the Office Action, under 35 U.S.C. § 103(a), as being unpatentable over Chen and Simon in view of U.S. Pat. No. 7,015,954 (“Foote”). Applicants respectfully traverse the rejections.

Claims 17 and 18 depend from claim 11. As explained above, the cited portions of Chen and Simon fail to disclose or suggest at least one element of claim 11. The cited portions of Foote fail to disclose or suggest the elements of claim 11 that are not disclosed or suggested by the cited portions of Chen and Simon. For example, the cited portions of Foote fail to disclose or suggest “the selector operable to determine a selected image module from the first image module and the second image module and to selectively cause a raw image captured by the selected image module to be sent to the processing engine; and the processing engine operable to perform

an image processing operation on the raw image captured by the selected image module, wherein the processing engine is not configured to perform the image processing operation on the first raw image and the second raw image simultaneously,” as in claim 11. Foote describes a camera array that captures a plurality of component images which are combined into a single scene. The component images from different cameras are warped and blended such that the combined image is seamless. Foote, Abstract. Thus, images from the cameras of Foote are processed simultaneously. Thus, the cited portions of Chen, Simon, and Foote, individually or in combination, fail to disclose or suggest at least one element of claim 11, and claim 11 is allowable. Claims 17 and 18 are allowable at least by virtue of their dependence from claim 11.

Claim 34 is Allowable

The Office has rejected claim 34, at paragraph 4 of the Office Action, under 35 U.S.C. § 103(a), as being unpatentable over Chen and Simon in view of U.S. Pat. No. 6,791,076 (“Webster”). Applicants respectfully traverse the rejection.

Claim 34 depends from claim 11. As explained above, the cited portions of Chen and Simon fail to disclose or suggest at least one element of claim 11. The cited portions of Webster fail to disclose or suggest the elements of claim 11 that are not disclosed or suggested by the cited portions of Chen and Simon. For example, the cited portions of Webster fail to disclose or suggest “the selector operable to determine a selected image module from the first image module and the second image module and to selectively cause a raw image captured by the selected image module to be sent to the processing engine; and the processing engine operable to perform an image processing operation on the raw image captured by the selected image module, wherein the processing engine is not configured to perform the image processing operation on the first raw image and the second raw image simultaneously,” as in claim 11.

Webster describes an image sensor package that includes an image sensor and a lens. Webster, Abstract. The cited portions of Webster fail to disclose or suggest “the selector operable to determine a selected image module from the first image module and the second image module and to selectively cause a raw image captured by the selected image module to be sent to the processing engine; and the processing engine operable to perform an image processing operation on the raw image captured by the selected image module, wherein the processing engine is not configured to perform the image processing operation on the first raw

image and the second raw image simultaneously,” as in claim 11. Thus, the cited portions of Chen, Simon, and Webster, individually or in combination, fail to disclose or suggest at least one element of claim 11, and claim 11 is allowable. Claim 34 is allowable at least by virtue of its dependence from claim 11.

Claims 1, 3, 4, 6, 23, 25, and 35-40 are Allowable

The Office has rejected claims 1, 3, 4, 6, 23, 25, 27 and 35-40, at paragraph 5 of the Office Action, under 35 U.S.C. § 103(a), as being unpatentable over Chen, Simon, and Webster. Claim 27 has been cancelled, without prejudice or disclaimer, rendering the rejection of claim 27 moot. Applicants respectfully traverse the remaining rejections.

1, 3, 4, 6, 35, 36, 39, and 40

The cited portions of Chen, Simon, and Webster fail to disclose or suggest the specific combination of claim 1. For example, the cited portions of Chen, Simon, and Webster do not disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1.

Chen describes a compound camera system for generating an enhanced virtual image. Chen, Abstract. The camera system has a data processor that is capable of receiving image data from a plurality of camera components and processing the image data from the plurality of camera components to generate the enhanced virtual image. Chen, col. 2, ll. 40-57. The data processor of Chen selects pixels from a first image or a second image depending on which pixels have the least amount of blur. Chen, col. 2, ll. 58-65. The cited portions of Chen fail to disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1.

That is, Chen describes simultaneously processing a first and a second image to generate a virtual image; rather than a selector that causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image.

Simon describes a motor vehicle control system that includes a pair of cameras for producing first and second images of a passenger area. Simon, Abstract. The camera system of Simon produces stereoscopic images which are processed simultaneously to determine distance information. Simon, col. 1, ll. 61-62; col. 2, ll.13-24; and col. 3, ll. 39-50. Thus, the camera system of Simon does not include a selector that causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image. Thus, the cited portions of Simon fail to disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1.

Webster describes an image sensor package that includes an image sensor and a lens. Webster, Abstract. The cited portions of Webster fail to disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1.

Thus, the cited portions of Chen, Simon, and Webster, individually or in combination, fail to disclose or suggest at least one element of claim 1. Hence, claim 1 is allowable.

Claims 3, 4, 6, 35, 36, 39, and 40 depend from claim 1, which Applicants have shown to be allowable. Hence, the cited portions of Chen, Simon, and Webster, individually or in combination, fail to disclose or suggest at least one element of each of claims 3, 4, 6, 35, 36, 39, and 40. Accordingly, claims 3, 4, 6, 35, 36, 39, and 40 are also allowable, at least by virtue of their dependence from claim 1.

Claims 23, 25, 37 and 38

The cited portions of Chen, Simon, and Webster fail to disclose or suggest the specific combination of claim 23. For example, the cited portions of Chen, Simon, and Webster do not disclose or suggest “performing an image processing operation on the only one set of image information representing the only one view sent to the processing engine, wherein the processing engine is not configured to perform the image processing operation on the first image information and the second image information simultaneously,” as in claim 23.

Chen describes a compound camera system for generating an enhanced virtual image. Chen, Abstract. The camera system has a data processor that is capable of receiving image data from a plurality of camera components and processing the image data from the plurality of camera components to generate the enhanced virtual image. Chen, col. 2, ll. 40-57. The data processor of Chen selects pixels from a first image or a second image depending on which pixels have the least amount of blur. Chen, col. 2, ll. 58-65. The cited portions of Chen fail to disclose or suggest “performing an image processing operation on the only one set of image information representing the only one view sent to the processing engine, wherein the processing engine is not configured to perform the image processing operation on the first image information and the second image information simultaneously,” as in claim 23. Rather, Chen describes simultaneously processing a first and a second image to generate a virtual image.

Simon describes a motor vehicle control system that includes a pair of cameras for producing first and second images of a passenger area. Simon, Abstract. The camera system of Simon produces stereoscopic images which are processed simultaneously to determine distance information. Simon, col. 1, ll. 61-62; col. 2, ll. 13-24; and col. 3, ll. 39-50. The cited portions of Simon fail to disclose or suggest “performing an image processing operation on the only one set of image information representing the only one view sent to the processing engine, wherein the processing engine is not configured to perform the image processing operation on the first image information and the second image information simultaneously,” as in claim 23.

Webster describes an image sensor package that includes an image sensor and a lens. Webster, Abstract. The cited portions of Webster fail to disclose or suggest “performing an image processing operation on the only one set of image information representing the only one view sent to the processing engine, wherein the processing engine is not configured to perform

the image processing operation on the first image information and the second image information simultaneously,” as in claim 23.

Thus, the cited portions of Chen, Simon, and Webster, individually or in combination, fail to disclose or suggest at least one element of claim 23. Hence, claim 23 is allowable.

Claims 25, 37 and 38 depend from claim 23, which Applicants have shown to be allowable. Hence, the cited portions of Chen, Simon, and Webster, individually or in combination, fail to disclose or suggest at least one element of each of claims 25, 37 and 38. Accordingly, claims 25, 37 and 38 are also allowable, at least by virtue of their dependence from claim 23.

Claims 8, 26, 28, 29 and 31 are Allowable

The Office has rejected claims 8, 26, 28, 29 and 31, at paragraph 6 of the Office Action, under 35 U.S.C. § 103(a), as being unpatentable over Chen, Simon, and Webster in further view of U.S. Pat. No. 7,023,913 (“Monroe”). Applicants respectfully traverse the rejections.

Claim 8

Claim 8 depends from claim 1. As explained above, the cited portions of Chen, Simon, and Webster fail to disclose or suggest at least one element of claim 1. The cited portions of Monroe fail to disclose or suggest the elements of claim 1 that are not disclosed or suggested by the cited portions of Chen, Simon, and Webster. For example, the cited portions of Monroe fail to disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1.

Monroe describes a fully digital camera system. A digital camera collects images from image transducers. Multiple images are compressed and merged at the camera for transmission. Monroe, Abstract. The cited portions of Monroe fail to disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens

module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1. Thus, the cited portions of Chen, Simon, Webster, and Monroe, individually or in combination, fail to disclose or suggest at least one element of claim 1, and claim 1 is allowable. Claim 8 is allowable at least by virtue of its dependence from claim 1.

Claims 26, 28, 29 and 31

Claims 26, 28, 29 and 31 depend from claim 23. As explained above, the cited portions of Chen, Simon, and Webster fail to disclose or suggest at least one element of claim 23. The cited portions of Monroe fail to disclose or suggest the elements of claim 23 that are not disclosed or suggested by the cited portions of Chen, Simon, and Webster. For example, the cited portions of Monroe fail to disclose or suggest “performing an image processing operation on the only one set of image information representing the only one view sent to the processing engine, wherein the processing engine is not configured to perform the image processing operation on the first image information and the second image information simultaneously,” as in claim 23.

Monroe describes a fully digital camera system. A digital camera collects images from image transducers. Multiple images are compressed and merged at the camera for transmission. Monroe, Abstract. The cited portions of Monroe fail to disclose or suggest “performing an image processing operation on the only one set of image information representing the only one view sent to the processing engine, wherein the processing engine is not configured to perform the image processing operation on the first image information and the second image information simultaneously,” as in claim 23. Thus, the cited portions of Chen, Simon, Webster, and Monroe, individually or in combination, fail to disclose or suggest at least one element of claim 23, and claim 23 is allowable. Claims 26, 28, 29 and 31 are allowable at least by virtue of their dependence from claim 23.

Claim 2 is Allowable

The Office has rejected claim 2, at paragraph 7 of the Office Action, under 35 U.S.C. § 103(a), as being unpatentable over Chen, Simon, and Webster in further view of U.S. Pat. No. 5,920,337 (“Glassman”). Applicants respectfully traverse the rejection.

Claim 2 depends from claim 1. As explained above, the cited portions of Chen, Simon, and Webster fail to disclose or suggest at least one element of claim 1. The cited portions of Glassman fail to disclose or suggest the elements of claim 1 that are not disclosed or suggested by the cited portions of Chen, Simon, and Webster. For example, the cited portions of Glassman fail to disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1.

Glassman describes an omni directional visual image detector that uses a reflective rotund lens for projecting a panoramic picture onto a CCD array. Glassman, Title and Abstract. The cited portions of Glassman fail to disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1. Thus, the cited portions of Chen, Simon, Webster, and Glassman, individually or in combination, fail to disclose or suggest at least one element of claim 1, and claim 1 is allowable. Claim 2 is allowable at least by virtue of its dependence from claim 1.

Claim 9 is Allowable

The Office has rejected claim 9, at paragraph 8 of the Office Action, under 35 U.S.C. § 103(a), as being unpatentable over Chen, Simon, Webster, Monroe, and Glassman. Applicants respectfully traverse the rejection.

Claim 9 depends from claim 1. As explained above, the cited portions of Chen, Simon, Webster, Monroe, and Glassman, individually or in combination, fail to disclose or suggest at least one element of claim 1, and claim 1 is allowable. Claim 9 is allowable at least by virtue of its dependence from claim 1.

Claims 41 and 42 are Allowable

The Office has rejected claims 41, 42, 45 and 46, at paragraph 9 of the Office Action, under 35 U.S.C. § 103(a), as being unpatentable over Chen, Simon, Webster, and Foote. Claims 45 and 46 have been cancelled, without prejudice or disclaimer, rendering the rejections of these claims moot. Applicants respectfully traverse the remaining rejections.

Claims 41 and 42 depend from claim 1. As explained above, the cited portions of Chen, Simon, and Webster fail to disclose or suggest at least one element of claim 1. The cited portions of Foote fail to disclose or suggest the elements of claim 1 that are not disclosed or suggested by the cited portions of Chen, Simon, and Webster. For example, the cited portions of Foote fail to disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1.

Foote describes a camera array that captures a plurality of component images which are combined into a single scene. The component images from different cameras are warped and blended such that the combined image is seamless. Foote, Abstract. Thus, images from the cameras of Foote are processed simultaneously. The cited portions of Foote fail to disclose or suggest “a selector integrated into the single electronic device, wherein while the single electronic device is on and the first image sensor lens module is generating the first raw image data and the second image sensor lens module is generating the second raw image data, the selector causes only one of the first raw image data and the second raw image data to be routed to the shared image processing engine to be transformed into the viewable image,” as in claim 1. Thus, the cited portions of Chen, Simon, Webster, and Foote, individually or in combination, fail

to disclose or suggest at least one element of claim 1, and claim 1 is allowable. Claims 41 and 42 are allowable at least by virtue of their dependence from claim 1.

CONCLUSION

Applicants have pointed out specific features of the claims not disclosed, suggested, or rendered obvious by the references applied in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of each of the objections and rejections, as well as an indication of the allowability of each of the pending claims.

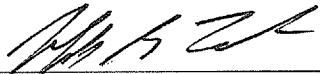
Any changes to the claims in this response that have not been specifically noted to overcome a rejection based upon the cited art should be considered to have been made for a purpose unrelated to patentability and no estoppel should be deemed to attach thereto.

The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would in any way facilitate allowance of this application.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-2469.

Respectfully submitted,

5-25-2010
Date


Jeffrey G. Toler, Reg. No. 38,342
TOLER LAW GROUP
8500 Bluffstone Cove, Suite A201
Austin, TX 78759
Telephone: (512) 327-5515
Facsimile: (512) 327-5575